

PENDING CLAIMS AS AMENDED

Listing of Claims:

Please amend the claims as follows:

1. (cancelled)
2. (cancelled)
3. (previously presented) In a wireless communication system adapted for packet data transmissions, the system having at least one mobile station with pending data at a transmitter, a method comprising:
 - calculating a packet delay time for a first receiver of the at least one mobile station with pending data;
 - comparing the packet delay time to a first threshold;
 - if the packet delay time violates the first threshold, calculating a first delay term;
 - calculating a priority function for the first receiver using the first delay term; and
 - scheduling transmissions to the receiver according to the priority function, wherein a packet delay time function is calculated as:
$$g(d)=DRC_{MAX}/DRC_{AVE}$$
for packet delay time requirement greater than the first threshold, wherein DRC_{MAX} is a maximum of DRC values for receivers in an active set of the transmitter, and wherein DRC_{AVE} is an average DRC value for the first receiver, wherein DRC is a data rate associated with at least one mobile station and wherein $g(d)$ is a packet delay time function.
4. (currently amended) In a wireless communication system adapted for packet data transmissions, a method comprising:
 - identifying a user having a packet delay higher than a threshold; and
 - adjusting the priority of the user while the packet delay is higher than the threshold, the adjusting including:

calculating a packet delay time for the user;
comparing the packet delay time to a first threshold;
if the packet delay time violates the first threshold, calculating a first delay term;
calculating the priority for the user using the first delay term; and
scheduling transmissions to the user according to the priority, and
wherein the first delay term is calculated according to one of:
 $g(d)=1+k*\text{MAX}(0, (d_i-\tau_i))$ for packet delay time requirement greater than the first
threshold, wherein k is an integer, d_i is a delay time requirement of an i^{th} mobile
station, and τ_i is a threshold associated with the i^{th} mobile station; and
 $g(d)=\text{DRCMAX}/\text{DRCAVE}$ for packet delay time requirement greater than the first
threshold, wherein DRCMAX is a maximum of DRC values for receivers in an
active set of the transmitter, and wherein DRCAVE is an average DRC value for
the first receiver, wherein DRC is a data rate associated with at least one mobile
station and wherein $g(d)$ is a packet delay time function.

5. (previously presented) The method of Claim 4, wherein the threshold is updated during operation of the system.

6. (currently amended) In a wireless communication system adapted for packet data transmissions, a computer executing logic comprising:

identifying a user having a throughput higher than a threshold; and

adjusting the priority of the user while the packet delay is higher than the threshold, the adjusting including:

calculating a packet delay time for the user;

comparing the packet delay time to a first threshold;

if the packet delay time violates the first threshold, calculating a first delay term;

calculating the priority for the user using the first delay term; and

scheduling transmissions to the user according to the priority, and

wherein the first delay term is calculated according to one of:

$g(d)=1+k*\text{MAX}(0, (d_i-\tau_i))$ for packet delay time requirement greater than the first threshold, wherein k is an integer, d_i is a delay time requirement of an i^{th} mobile station, and τ_i is a threshold associated with the i^{th} mobile station; and

$g(d)=\text{DRCMAX}/\text{DRCAVE}$ for packet delay time requirement greater than the first threshold, wherein DRCMAX is a maximum of DRC values for receivers in an active set of the transmitter, and wherein DRCAVE is an average DRC value for the first receiver, wherein DRC is a data rate associated with at least one mobile station and wherein $g(d)$ is a packet delay time function.

7. (previously presented) The system of Claim 6, wherein the threshold is updated during operation of the system.

8. (currently amended) ~~The method of Claim 1,~~ In a wireless communication system adapted for packet data transmissions, the system having at least one mobile station with pending data at a transmitter, a method comprising:

calculating a packet delay time for a first receiver of the at least one mobile station with pending data;

comparing the packet delay time to a first threshold;

if the packet delay time violates the first threshold, calculating a first delay term;

calculating a priority function for the first receiver using the first delay term; and

scheduling transmissions to the receiver according to the priority function,

wherein the first delay term is calculated as:

$g(d)=1+k*\text{MAX}(0, (d_i-\tau_i))$ for packet delay time requirement greater than the first threshold, wherein k is an integer, d_i is a delay time requirement of an i^{th} mobile station, and τ_i is a threshold associated with the i^{th} mobile station.

9. (currently amended) The method of Claim 8, [[1,]] wherein the threshold is updated during operation of the system.

10. (currently amended) The method of Claim 8, [[1,]] wherein a single threshold is used for all mobile stations in the system.
11. (currently amended) The method of Claim 8, [[1,]] wherein at least two mobile stations in the system are associated with respective thresholds.
12. (previously presented) The method of Claim 4, wherein a single threshold is used for all mobile stations in the system.
13. (previously presented) The method of Claim 4, wherein at least two mobile stations in the system are associated with respective thresholds.
14. (previously presented) The system of Claim 6, wherein at least two mobile stations in the system are associated with respective thresholds.
15. (previously presented) The system of Claim 6, wherein a single threshold is used for all mobile stations in the system.
16. (currently amended) A base station comprising:
 - means for receiving, from a mobile user, a user packet delay requirement; ~~and~~
 - means, responsive to the means for receiving, for establishing a priority of the user based at least in part on the user packet delay requirement, the means for establishing a priority including means for calculating a packet delay time for the mobile user, means for comparing the packet delay time to a first threshold, if the packet delay time violates the first threshold, means for calculating a first delay term, means for calculating the priority for the mobile user using the first delay term; and
 - means for scheduling transmissions to the mobile user according to the priority, wherein a packet delay time function is calculated as $g(d)=DRCMAX/DRCAVE$ for packet delay time requirement greater than the first threshold, wherein DRCMAX is a maximum of DRC values for receivers in an active set of the transmitter, and wherein DRCAVE is an average DRC value for

the first receiver, wherein DRC is a data rate associated with at least one mobile station and wherein $g(d)$ is a packet delay time function.

17. (currently amended) In a wireless communication system adapted for packet data transmissions, a computer executing logic comprising:

identifying a user having a packet delay requirement;

comparing the packet delay requirement to a threshold;

if the packet delay time violates the threshold, calculating a first delay term;

calculating a priority function for the first receiver using the first delay term; and

scheduling transmissions to the receiver according to the priority function, wherein a packet delay time function is calculated as:

$g(d)=DRC_{MAX}/DRC_{AVE}$ for packet delay time requirement greater than the threshold,

wherein DRC_{MAX} is a maximum of DRC values for receivers in an active set of

the transmitter, and wherein DRC_{AVE} is an average DRC value for the first

receiver, wherein DRC is a data rate associated with at least one mobile station

and wherein $g(d)$ is a packet delay time function; and

adjusting the priority of the user based on the comparison.